SERUM FERRITIN IN ACUTE MYOCARDIAL INFARCTION

Abstract

Background :

Coronary artery disease is the leading epidemic of the millennium contributing to 12 million deaths annually worldwide.Normally the initiating event in a coronary artery disease is the disruption of the atherogenic plaque leading onto vessel occlusion resulting in myocardial infarction . Inflammation plays an essential role at all stages of atherosclerosis. There has been researches over the past two decades suggesting a relationship between increased body iron stores and increased risk of CAD. This is attributed to the pro oxidant property and increased free radical production associated with iron overload.

OBJECTIVES :

- To study the level of serum ferritin in acute myocardial infarction
- To compare the relationship of serum ferritin with conventional risk factors of acute myocardial infarction like diabetes mellitus,body mass index, hypertension and smoking.

METHODS :

A case control study involving 50 cases of acute myocardial infarction patients and 50 age and sex matched controls were enrolled for the study. Required information were collected using a proforma. Serum ferritin levels

were measured and analysed using ELISA technique. Patients were treated according to our institutional protocol.

RESULTS :

The mean serum ferritin concentration among patients with acute myocardial infarction was 250.85+/- 79.01 ng/ mL whereas in control group the mean serum ferritin concentration was 113.59 +/- 50.5 ng/mL. The difference in serum ferritin concentration was further analysed using a chi square test and was found to be statistically significant (p value <0.001).

CONCLUSION :

In our study, serum ferritin is found to be significantly increased in patients with acute MI compared to age and sex matched controls. Thus, it is recommended to measure serum ferritin levels in all patients at high risk for CAD and treat them accordingly in addition to all the other conventional risk factors.

KEY WORDS :

- Serum ferritin
- Acute myocardial infarction
- Atherosclerosis